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EXAMINER

ELPENORD, CANDAL

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/526,886	<b>Applicant(s)</b> MISHRA ET AL.	
	<b>Examiner</b> Candal Elpenord	<b>Art Unit</b> 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9-29 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>13 June 2005</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

1. **Claims 22-29** are objected to under 37 CFR 1.75 because of the following informalities.

**Regarding claim 22**, the phrase "the value stored", recited in line 7. It is suggested to applicant to change "the value stored" to ---a value stored---

**Claims 23-29** are objected to since they depend on claim 22.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 10-14** are rejected under 35 U.S.C. 102(e) as being anticipated by Carlson et al (US 6,381,649 B1).

**Regarding claim 10**, Carlson et al. discloses a data switch (fig. 2, Processing Circuitry and Switching Fabric 24, recited in column 5, lines 5-12) for passing packets as a plurality of sets of one or more packet flows ("data flow policy of packet received", recited in column 8, lines 29-38) between a plurality of ports (fig. 2, "input and output modules", recited in column 6, lines 15-24), the data switch (fig. 2, Processing Circuitry

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and Switching Fabric 24, recited in column 5, lines 5-12) comprising: a flow detection device (fig. 3, packet processing circuitry, "monitoring flow at a node", recited in column 2-3, lines 1-2 and 1-4), configured to detect a set of one or more packet flows to which an incoming packet belongs ("data flow policy of received packet and class of service", recited in column 8, lines 29-38); and a bandwidth monitoring device (fig. 3, "Comparison circuit determined if packet causes allowable rate to be exceeded", recited in column 7, lines 12-20) having a memory (fig. 3, SRAM 56) with a section associated with each set of one or more packet flows ("memory location for each class of service and link", recited in paragraph 7, lines 44-48), the bandwidth monitoring device (fig. 3, comparison Circuit) configured to issue policing instructions based on the size of the packets ( "adjusting the value of the rate of packet and then passes packet to processor", recited in column 7, lines 20-31) and a bandwidth counter (fig. 3, Counter 32, "counting of unit s data and counter value", recited in column 3, lines 6-13) and stored in the memory (fig. 3, SRAM 56, recited in column 4, lines 7-15 and abstract, lines 1-5).

**Regarding claim 11**, Carlson et al. discloses the data switch (fig. 2, Switching Fabric 24, recited in column 5, lines 5-12), wherein the memory ("storing device", recited in column 31-32) comprises a RAM memory (fig. 3, SRAM 58, recited in column 3, lines 32-37).

**Regarding claim 12**, Carlson et al. discloses the data switch further comprising a plurality of bandwidth counters (fig. 3 counter and "multiple counters", recited in

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column 8, line 20-26), each corresponding particularly to a corresponding set of one (count values for received data packets", recited in column 9-20) or more packet flows .

**Regarding claim 13**, Carlson et al. discloses the data switch (fig. 2, Processing Circuitry and Switching Fabric 24, recited in column 5, lines 5-12) wherein the bandwidth monitoring device (fig. 3, "Comparison circuit determined if packet causes allowable rate to be exceeded", recited in column 7, lines 12-20) is configured to issue the policing instructions of a type ("transfer of packet to stage processor", recited in column 8, lines 35-38) selected based in part on the detected set of one or more packet flows ("processing of packet according to PL and class of service", recited in column 8, lines 29-40 and fig. 5).

**Regarding claim 14**, Carlson et al. discloses the data switch (fig. 2, Processing Circuitry and Switching Fabric 24, recited in column 5, lines 5-12), wherein each set of one or more flows is associated with one of a plurality of policing instructions (discarding of packet and adjusting the predetermined thresholds", recited in abstract, lines 15-19) the plurality of policing instructions including dropping a packet ("discard of packet when threshold is exceeded", recited in column 3, lines 38-46) and reducing a packet priority ("assign discard eligibility to packet exceeding predetermined threshold", recited in column 7, lines 33-41).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. **Claims 15-29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yazaki et al (EP 1058424 A2) in view of Carlson et al (US 6,381,649 B1).

**Regarding claims 15, 22**, Yazaki et al. discloses the data switch (fig. 1, Transmission 121 and Receiving devices 120, recited in column 6, lines 34-41) for passing packets ("processing of packets", recited in column 8, lines 50-55), as sets of



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one or more packet flows between a plurality of ports, the data switch comprising: a flow detection device (fig. 5, Flow Detecting Unit 540, "detecting a series of packets" recited in column 4, lines 14-22) configured to detect a set of one or more packet flows to which each packet belongs ("detecting flow identity of packet", recited column 4, lines 20-23 and "routing of data packets on the header/ Differentiated Service Point Code", recited in column 7-8, lines 1-2 and 1-5); the bandwidth monitoring device (fig. 1, Bandwidth Monitoring Device Unit 141, recited in abstract, lines 1-8) being configured to: subtract (fig. 5, Bucket Water Level Decision unit 511 "subtracting water level of due to arrival of packet", recited in column 12, lines 13-19/"leaky bucket algorithm", recited in column 4, lines 9-13) the size of the packet from a value of the bandwidth counter ("bucket water level decision circuit counts of packets", recited in column 12, lines 2-8) corresponding to the detected set of one more packet flows ("flow detection", recited in column 11, lines 27-38) to obtain an adjusted value (water level value", recited in column 12, lines 19-24) and to issue a policing instruction "(indicative of conformance", recited in column 12, lines 39-55) according to the relationship of the adjusted value with one or more predetermined levels replace the value of the bandwidth counter ("packet length byte is added to bucket water level", recited in column 12, lines 25-35) corresponding to the detected set of one more packet flows by the adjusted value in the event that the packet is transmitted by the switch; and replenish the value stored in each bandwidth counter at intervals ("upon receiving bandwidth check result indicative of conformance and arrival time/time the control circuit writes the bucket water level", recited in column 13, lines 25-34).

**Regarding claims 20, 26,** Yazaki et al. discloses the data switch (fig. 1, Transmission 121 and Receiving devices 120/ bandwidth monitoring device, recited in column 6, lines 34-41), wherein the plurality of sets of one or more flows are grouped into ranges (monitoring of one or more flows who share a bandwidth in check table", recited in column 10, lines 37-46), and wherein the policing instructions in respect of a particular set of one or more flows depends upon the range in which the set of one or more flows lies ("bandwidth check table policy rate", recited in column 10; lines 48-58)

**Regarding claims 21, 27,** the data switch (fig. 1, Transmission 121 and Receiving devices 120/ bandwidth monitoring device, recited in column 6, lines 34-41), wherein each set of one or more flows is associated with one of a plurality of policing instructions ("plurality of entries in bandwidth control check table and network priorities" recited in column 4, line 39-51 and lines 22-30) the plurality of policing instructions including dropping a packet ("discard of non-priority packet", recited in column 8, lines 23-29) packet and reducing a priority packet ("discard of priority packet", recited in column 8, lines 15-22).

Yazaki et al. teaches all the subject matter of the claimed invention. Yazaki et al is silent with respect to the following features: **regarding claim 1**, and a bandwidth monitoring device having a RAM memory with a section corresponding to each set of one or more packet flows, the memory sections each containing a bandwidth counter for the corresponding set of one or more packet flows, **regarding claims 16, 23, 28**, the data switch according to claim 15 wherein the one or more predetermined levels include



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a first predetermined level corresponding to a first set of one or more flows and a second predetermined level, different from the first predetermined level, corresponding to a second set of one or more flows, **regarding claim 17, 24**, the data switch according to claim 16 wherein data representative of the one or more predetermined levels is stored in the RAM memory, **regarding claim 18, 25**, the data switch according to claim 17 wherein the RAM memory includes control parameter indication portions for each of the sets of one or more flows, the control parameter indication portions indicating respective registers for storing the data representative of the one or more predetermined levels, **regarding claims 19, 29**, the data switch, wherein data representative of the one or more predetermined levels is stored in the RAM memory. However, Carlson in a similar field of endeavor discloses, a bandwidth monitoring device (fig. 3, "Policing Circuitry", monitoring data at link", recited in column 6, lines 37-48) having a RAM memory (fig. 3, SRAM 56-60) with a section corresponding to each set of one or more packet flows ("memory location or bucket allocated", recited in abstract, lines 12-4), the memory sections each containing a bandwidth counter (fig. 3, "Counter 32" which is connected to SRAM 56-60, recited in column for the corresponding set of one or more packet flows as recited in **claims 1, 22, regarding claims 16, 23, 28**, the data switch (fig. 2, Processing Circuitry and Switching Fabric 24, recited in column 5, lines 5-12), wherein the one or more predetermined levels (fig. 3, processor stages 1-3, recited in column 7, lines 42-48) include a first predetermined level ("predetermined threshold and SRAM 56", recited in column 7, lines 51-53) corresponding to a first set of one or more flows and a second predetermined level

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("predetermined threshold and SRAM 58", recited in column 7, lines 51-53), different from the first predetermined level, corresponding to a second set of one or more flows, **regarding claims 17, 24**, the data switch (fig. 2, Processing Circuitry and Switching Fabric 24, recited in column 5, lines 5-12), wherein data representative ("data packet received", recited in column 7, lines 49-51) of the one or more predetermined levels (fig. 3, SRAM 56, 58 and 60, "stores the predetermined threshold for each link", recited in column 7, lines 51-54) is stored in the RAM memory (fig. 3, SRAM 56-60), **regarding claims 18, 25**, the data switch (fig. 2, Processing Circuitry and Switching Fabric 24, recited in column 5, lines 5-12), wherein the RAM memory (fig. 3, SRAM 56-60) includes control parameter indication ("bucket value used by the processor for comparison with threshold value", recited in column 55-59) portions (fig. 3, SRAM 56-60 for each class or packet", recited in column 7, lines 51-54) for each of the sets of one or more flows, the control parameter indication portions indicating respective registers (SRAM 56-60 are used to store bucket value as shown in fig. 3) for storing the data representative of the one or more predetermined levels ("threshold", recited in column 7, lines 60-67), **regarding claims 19, 29**, the data switch (fig. Switch Fabric 24), wherein data representative ("received of data packet", recited in column 7, lines 52-53) of the one or more predetermined levels ("predetermined threshold", recited in column 7, lines 51-53) is stored in the RAM memory ("memory 56-60 stores threshold", recited in column 7, lines 51-53). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the features of Yazaki et al. by

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using features as taught by Carlson et al. in order to provide.....

(See Carson, column 2-3, lines 1-2 and lines 1-5) for motivation).

**Regarding claims 22-29** are rejected for the same reasons as claims 15-25 since they are the corresponding method claims of claims 15-21 and they have the same limitations.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kawasaki et al (US 2001/0014081 A1), Aimoto et al (US 6,122,252), Krishnamurthy et al (US 2001/0025310 A1), Tallegas et al (US 2002/0089929 A1), Keck et al (US 2002/0101888 A1), and Saitoh, Satoru et al (US 2002/0169921 A1) are cited to show methods and systems that are related to the claimed invention.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Candal Elpenord whose telephone number is (571) 270-3123. The examiner can normally be reached on Monday through Friday 7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Bin Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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CE

KWANG BIN YAO  
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Kwong Bin Yao', is written over the printed name and title.